

## **IN THE CLAIMS:**

This listing of claims will replace all prior versions, and listing, of claims in the application.

### **Listing of the Claims:**

1. (Cancelled)
2. (Original) An electromagnetic radiation absorber for absorbing radiation in the wavelength range  $\lambda_{\min}$  to  $\lambda_{\max}$  comprising a conductor layer in contact with a dielectric layer wherein the conductor layer carries a plurality of apertures of sub-wavelength dimension and wherein the thickness of the absorber is less than  $\lambda_{\min}/4n$ , where  $n$  is the refractive index of the dielectric.
3. (Currently Amended) An e/m radiation absorber as claimed in ~~claims 1 or 2~~ claim 2 wherein the thickness of the material is less than  $\lambda_{\min}/10$ .
4. (Currently Amended) An e/m radiation absorber as claimed in any of ~~claims 1 to 3~~ claim 2 wherein the apertures are slit structures.
5. (Original) An e/m radiation absorber as claimed in claim 4 wherein the slit structures are periodic in nature.
6. (Currently Amended) An e/m radiation absorber as claimed in ~~claim 4 or 5~~ claim 4 wherein the slit structures are curved.
7. (Currently Amended) An e/m radiation absorber as claimed in ~~claim 4 or 5~~ claim 4 wherein the slit structures comprise a series of non-parallel slits.
8. (Currently Amended) An e/m radiation absorber as claimed in ~~claim 4 or 5~~ claim 4 wherein the slit structures comprise a parallel slit arrangement.
9. (Original) An e/m radiation absorber as claimed in claim 8 wherein the wavelength  $\lambda$  of radiation absorbed is determined by

$$\lambda \approx 2nG/N$$

where  $\lambda$  is the wavelength in the range  $\lambda_{\min}$  to  $\lambda_{\max}$  where maximum absorption occurs,  $n$  is

the refractive index of the dielectric, G is the spacing of the slits and N is an integer greater than or equal to 1.

10. (Currently Amended) An e/m radiation absorber as claimed in ~~claim 4 or 5~~ claim 4 wherein the slit structure comprises two orthogonal sets of parallel slits.
11. (Currently Amended) An e/m radiation absorber as claimed in any of ~~claim 4 or 5~~ claim 4 wherein the slit structures comprise three sets of parallel slits at 60 degree azimuthal separation.
12. (Currently Amended) An e/m radiation absorber as claimed in any of ~~claims 4 to 11~~ claim 4 wherein the slit width is less than 400 microns.
13. (Original) An e/m radiation absorber as claimed in claim 12 wherein the slit width is less than 50 microns.
14. (Currently Amended) An e/m radiation absorber as claimed in ~~any preceding claim~~ claim 2 wherein the refractive index of the dielectric can be actively varied.
15. (Currently Amended) An adhesive tape comprising an e/m radiation absorber according to ~~any preceding claim~~ claim 2.
16. (Currently Amended) An automobile wherein a proportion of the surface of the automobile is covered in an e/m radiation absorber according to ~~any of claims 1 to 13~~ claim 2.
17. (Currently Amended) A panel covering for application to a building wherein the panel is covered in an e/m radiation absorber according to ~~any of claims 1 to 13~~ claim 2.
18. (Currently Amended) A heating element for use in a microwave comprising an e/m absorber as claimed in ~~any of claims 1 to 13~~ claim 2.
19. (Currently Amended) A tagging system comprising an e/m absorber as claimed in ~~any of claims 1 to 13~~ claim 2.

20. (New) An e/m radiation absorber as claimed in claim 2 wherein the thickness of the material is less than  $\lambda_{\min}/100$ .
21. (New) An e/m radiation absorber as claimed in claim 20 wherein the absorber is flexible.
22. (New) An e/m radiation absorber as claimed in claim 20 wherein the absorber is backed with an adhesive material.
23. (New) An e/m radiation absorber as claimed in claim 2 wherein the dielectric layer is sandwiched between the conductor layer and a second conductor layer.
24. (New) An e/m radiation absorber as claimed in claim 20 wherein the absorber is flexible, backed with an adhesive material, and wherein the dielectric layer is sandwiched between the conductor layer and a second conductor layer.
25. (New) An e/m radiation absorber as claimed in claim 2 wherein the conductor layer has metallic response for wavelengths in the range  $\lambda_{\min}$  to  $\lambda_{\max}$ .